

15977-3



Ifw

PATENT APPLICATION

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: )  
Sungho Jin ) Examiner: Richard A. Booth  
Application No.: 10/646,502 ) TC/Art Unit: 2812  
Filed: August 23, 2003 )  
For: Improved Microscale Vacuum Tube )  
Device and Method For Making Same ) August 22, 2005  
Mail Stop Amendment  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

INFORMATION DISCLOSURE STATEMENT

Sir:

In compliance with the duty of disclosure under 37 C.F.R. § 1.56 and in accordance with the practice under 37 C.F.R. §§ 1.97 and 1.98, the Examiner's attention is directed to the documents listed on the enclosed PTO-1449. In accordance with the Official Gazette notice dated August 5, 2003, copies of cited U.S. Patents and U.S. published applications are not enclosed. Copies of the other cited references, however, are enclosed. Also enclosed is a copy of an International Search Report received in a related PCT application.

I hereby certify that this correspondence is being deposited with the United States Postal Service as first-class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on

August 22, 2005

Date of Deposit

Daniel D. Sierchio (Reg. No. 53,591)

Name

Daniel D. Sierchio

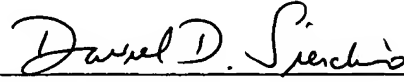
Signature

August 22, 2005

Date of Signature

It is respectfully requested that the PTO-1449 form be initialed and returned,  
indicating that the cited references have been considered.

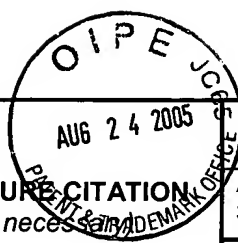
Respectfully submitted,

A handwritten signature in cursive script, reading "Daniel D. Sierchio", written over a horizontal line.

Daniel D. Sierchio

Registration No. 53,591

**DOCKET ADMINISTRATOR**  
Lowenstein Sandler PC  
65 Livingston Avenue  
Roseland, NJ 07068



<b>INFORMATION DISCLOSURE CITATION</b> (Use several sheets if necessary)	Docket Number (Optional) <b>15977-3</b>	Application Number <b>10/646,502</b>
	Applicant(s) <b>Sungho Jin</b>	
	Filing Date <b>08/23/2003</b>	Group Art Unit <b>2812</b>

U.S. PATENT DOCUMENTS							
EXAMINER INITIAL	REF	DOCUMENT NUMBER	DATE (MM-YYYY)	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
		6,069,599	05-2000	Py et al.	345	74.1	
		6,411,020	06-2002	Yaniv et al.	313	310	
		6,103,305	08-2000	Friedmann et al.	427	249.7	
		4,149,076	04-1979	Albert	378	98.6	
		6,545,425	04-2003	Victor	315	169.3	
		6,297,063	10-2001	Brown et al.	438	2	
		6,465,132	10-2002	Jin	429	231.8	
		6,538,367	03-2003	Choi et al.	313	309	
		5,566,704	05-2003	Choi et al.	257	314	
		6,664,727	12-2003	Nakamoto	313	495	
		6,673,392	01-2004	Lee et al.	427	249.1	
		6,741,019	05-2004	Filas et al.	313	355	
		5,982,095	11-1999	Jin et al.	313	582	

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)			
		Zhu et. al., "Large Current Density from Carbon Nanotube Field Emitters," Applied Physics Letters, Vol. 75, No. 6, pgs. 873-875 (1999)	
		Betzig, E. et al., "Near-Field Optics: Microscopy, Spectroscopy, and Surface Modification Beyond the Diffraction Limit", Science, Vol. 257, pgs 189-195 (July 10, 1992)	
		Cheng et al., "Bulk morphology and diameter distribution of single-walled carbon nanotubes synthesized by catalytic decomposition of hydrocarbons", Chem. Physics Letters, Vol. 289, pg. 602-610 (1998)	

Examiner Signature	Date Considered
EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP Section 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.	

Form PTO-A820 (also form PTO-1449)

<b>INFORMATION DISCLOSURE CITATION</b> <i>(Use several sheets if necessary)</i>	<b>Docket Number (Optional)</b> 15977-3	<b>Application Number</b> 10/646,502
	<b>Applicant(s)</b> Sungho Jin	
	<b>Filing Date</b> 08/23/2003	<b>Group Art Unit</b> 2812

**U.S. PATENT DOCUMENTS**

EXAMINER INITIAL	REF	DOCUMENT NUMBER	DATE (MM-YYYY)	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
		5,079,112	01-1992	Berger et al.	430	4	
		5,532,496	07-1996	Gaston	250	492.22	
		5,629,790	05-1997	Neukermans et al.	359	198	
		5,701,014	12-1997	Berger et al.	250	492.22	
		6,028,689	02-2000	Michalicek et al.	359	224	
		6,201,631	03-2001	Greywall	359	245	
		2002/0146853	10-2002	Karpov et al.	438	20	
		6,401,526	06-2002	Dai et al.	73	105	
		6,525,461	02-2003	Iwasaki et al.	313	495	
		2003/0071246	04-2003	Grigorov et al.	252	500	
		6,692,568	02-2004	Cuomo et al.	117	84	
		2003/0230753	12-2003	Stecki et al.	257	89	
		2002/0158342	10-2002	Tuominen et al.	257	784	
		5,904,561	05-1999	Tseng	438	643	
		6,653,228	11-2003	Choi et al.	438	637	

**FOREIGN PATENT DOCUMENTS**

EXAMINER INITIAL	REF	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	TRANSLATION	
							Yes	No

**OTHER DOCUMENTS** *(Including Author, Title, Date, Pertinent Pages, Etc.)*

		Andrews et al., Chem. Physics Letters, "Continuous production of aligned carbon nanotubes: a step closer to commercial realization", Vol. 303, pgs. 467-474 (1999)	
		Jessensky, O. et al., "Self-organized formation of hexagonal pore arrays in anodic alumina", Journal of Applied Physics, Vol. 72, pgs. 1173 (1998)	

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	<b>Applicant(s)</b> <b>Sungho Jin</b>	
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**U.S. PATENT DOCUMENTS**

EXAMINER INITIAL	REF	DOCUMENT NUMBER	DATE (MM-YYYY)	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
		2003/0034244	02-2003	Yasar et al.	204	192.3	
		6,062,931	05-2000	Chuang et al.	445	24	
		6,333,968	12-2001	Whitlock et al.	378	136	
		5,399,860	03-1995	Miyoshi et al.	250	310	
		6,489,349	12-2002	Thomas et al.	250	423F	
		6,512,235	01-2003	Eitan et al.	250	423F	
		6,660,959	12-2003	Vallance et al.	219	121.18	

**FOREIGN PATENT DOCUMENTS**

EXAMINER INITIAL	REF	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	TRANSLATION	
							Yes	No

**OTHER DOCUMENTS** *(Including Author, Title, Date, Pertinent Pages, Etc.)*

		Li, A.P. et al., Journal of Applied Physics, Vol. 84, No. 11 Pgs. 6023-6026 (1998)	
		Scott, A.W., Understanding Microwaves, Ch. 12, pgs. 282-317 (1993)	
		Spindt, C.A. et al., "Field-Emitter-Array Development For High Frequency Operation," J. Vac. Sci. Technol. B, Vol. 11, pgs. 468-473 (1993)	
		Kong, Y.C. et al., "Ultraviolet-emitting ZnO nanowires synthesized by a physical vapor deposition approach", Applied Physics Letters, Vol. 78, No. 4, pp 407-409 (2001)	
		Tsai, C.L. et al., "Bias effect on the growth of carbon nanotips using microwave plasma chemical vapor deposition", Applied Physics Letters, Vol. 81, No. 4, pp. 721-723 (2002)	
		Li, Chao et al., "In <sub>2</sub> O <sub>3</sub> nanowires as chemical sensors", Applied Physics Letters, Vol. 82, No. 10, pp 1613-1615 (2003)	
		Rouse, Ambrosio A. et al., "Field emission from molybdenum carbide", Applied Physics Letters, Vol. 76, No. 18, pp. 2583-2585 (2000)	

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